



Parcel C Remedial Action



Project Update for Parcel C Hunters Point Naval Shipyard San Francisco, California

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Contracted Support to NAVFAC BRAC PMO

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BCT Meeting August 29, 2013



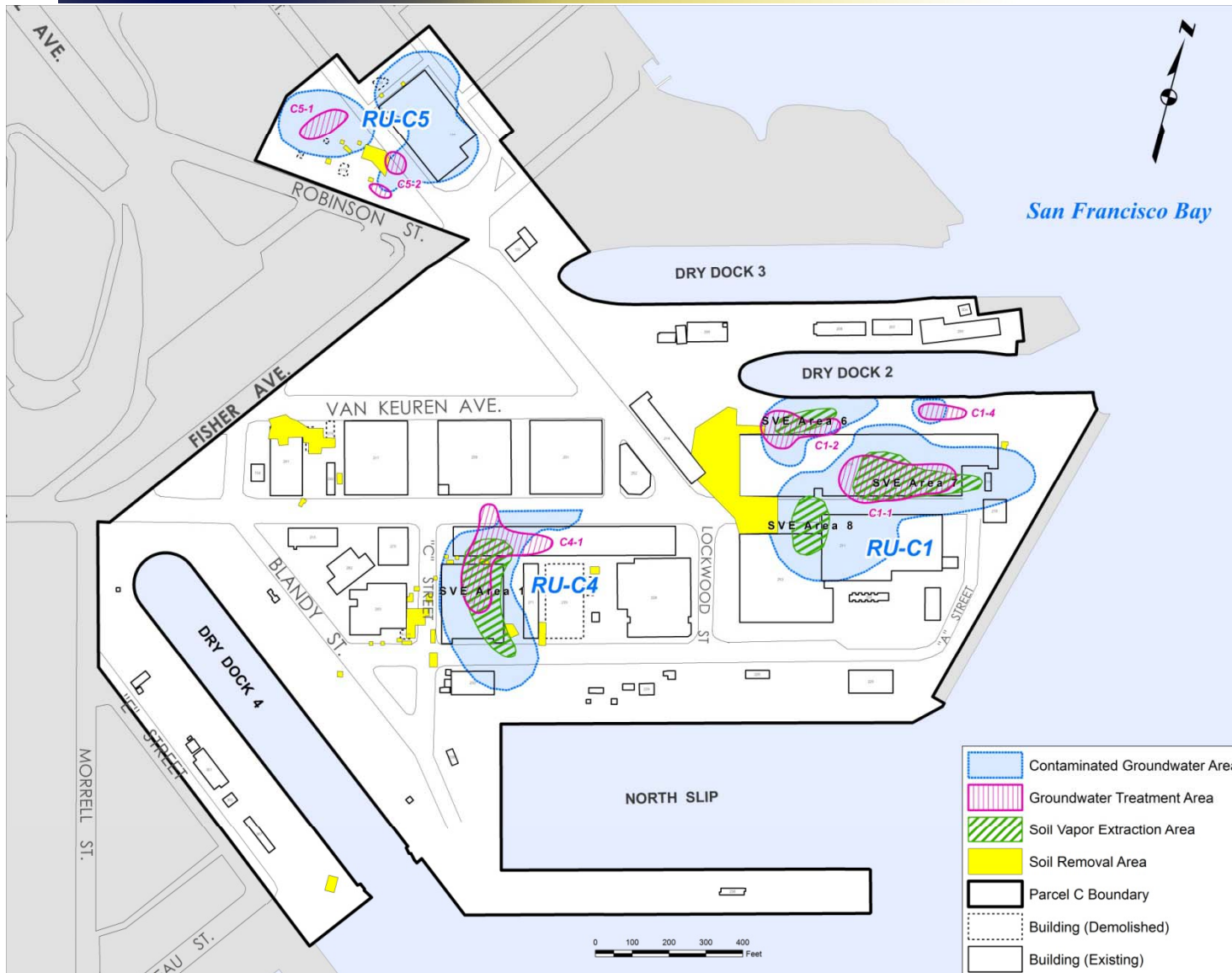
Agenda: RUs-C1, 4, and 5



- Parcel C Work Area Overview
- Remediation Progress
- Progress Photos
- What's Next



RUs C-1, 4, 5 Parcel C Work Area Overview





RUs C-1, 4, 5 Remediation Progress



- Final Parcel C Remedial Action Work Plan, issued 7/8/2013
- Mobilization to field 7/8
- Site preparation and personnel training 7/8 thru 7/10
- Decommissioned 20 wells in RU-C5 and over-drilled 3 wells in RU-C1 7/10 thru 7/22. Wells included soil vapor, shallow and deep heating, and temperature monitoring wells. All wells were pressure grouted
- Decommissioned three groundwater monitoring wells in Excavation 22-1 (RU-C1) and one in Bldg 241
- Excavation started in RU-C5 with Excavation 10-3 on 7/18
- Final Tech Memo for Soil Excavations, Parcel C issued 8/5
- Excavation work continued in RU-C1 Excavation 22-1 on 7/30 (accessible areas). Encountered TPH at corner of Bldg 214.



Excavating RU-C5



First bucket of soil removed in Excavation 10-3 (Bldg 134 in background) on 7/18 facing northeast



Excavating 10-3 (foreground) and loading of excavated soil (background) facing southeast on 7/24



Excavating RU-C1



Asphalt removal in Excavation 22-1 area next to Bldg 231 facing southeast on 8/5



Excavation and dust control in Excavation 22-1 on 8/12



Excavating RU-C1 (22-1) - TPH Encountered



Close-up of Bldg 214 corner –
Deploying oil boom to absorb TPH in
Excavation 22-1 (8/16)

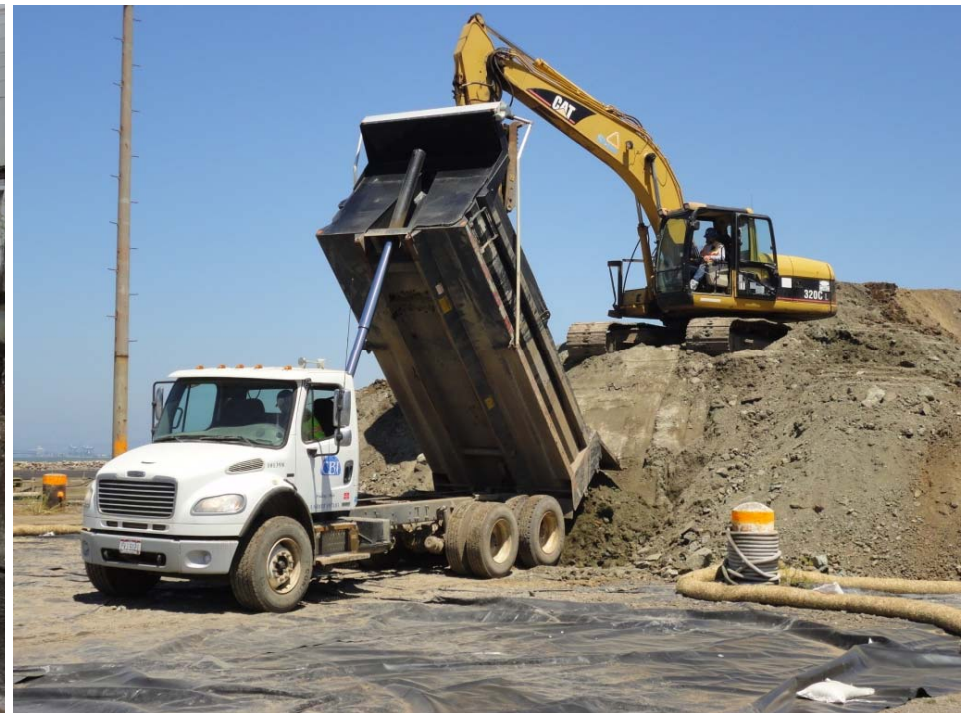
- TPH at corner of Bldg 214 at 10 ft bgs, facing southeast
- Corresponds to TPH Program's AOC 28-J
- Over-excavation planned to address TPH



Excavating RU-C1



Encountered old seawall when excavating
Excavation 22-1 next to Bldg 214 (8/6)



Stockpiling RU-C1 tall to maximize soil
storage space along Bldg 231



RUs C-1, 4, 5 Remediation Progress, cont'd



- Completed solvent line flush in Bldg 281 on 8/19
- Will complete solvent line flush in Bldg 253 when accessible – coordinating with rad remediation contractor for Bldg 253/211
- Installed 9 soil vapor points in SVE Plume 3 (RU-C5) and 11 in SVE Plume 8 inside Bldg 253 (RU-C1)
- Currently removing concrete in Bldg 241 area Excavation 18-3 in preparation for excavation
- Confirmation sample data pending from excavation areas in RU C-1 and 5



Solvent Line Flushing Bldg 281



- When piping (1-1/2 inch diameter approx 125 lf long) was exposed, the solvent line was triple rinsed
- Line was pressure tested twice
 - held 8 PSI for over 30 minutes without pressure drop
- Line will be grouted



Exposing Solvent Line



Checking conditions with PID while approaching solvent line (8/15)



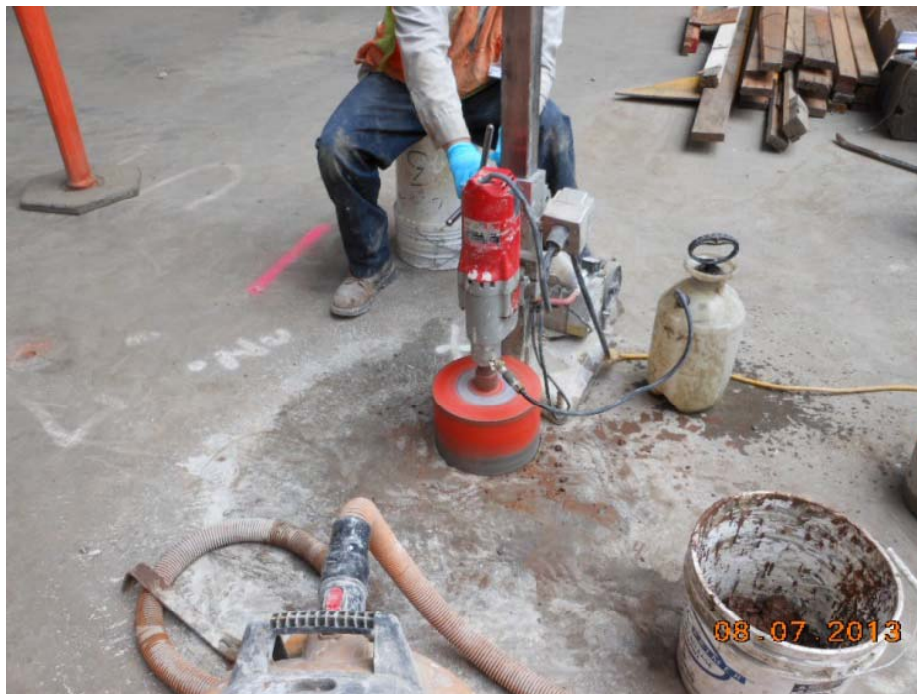
RUs C-1, 4, 5: What's Next



- Install vapor monitoring and vapor extraction wells in areas where excavations have been completed and soil samples meet cleanup goals (start September)
- Install groundwater monitoring wells (start September)
- Baseline groundwater sampling following well development (October)
- In-situ bioremediation and ZVI injection (to follow upon completion of baseline groundwater sampling and vapor extraction)
- SVE systems installation (start October)



Soil Vapor Monitoring Points



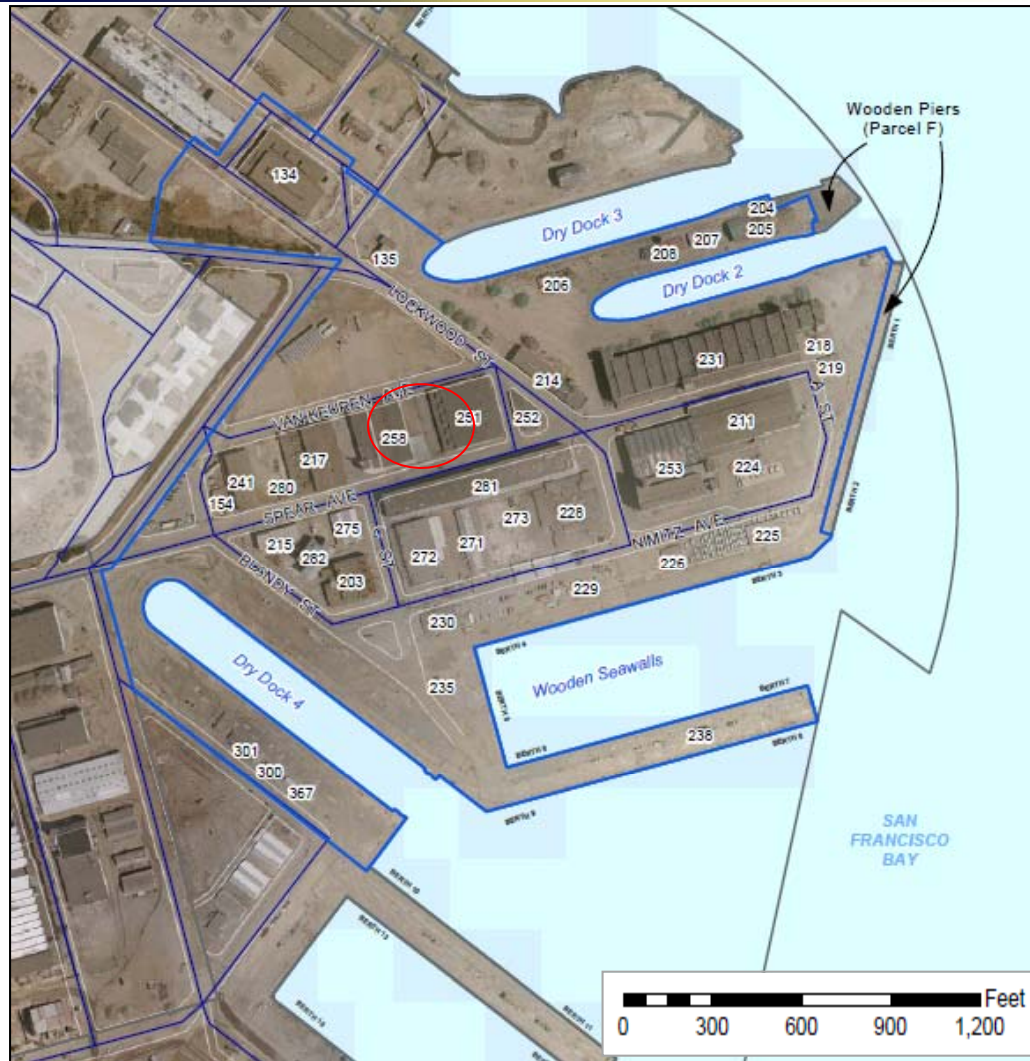
Concrete coring and installation of 11 soil vapor monitoring points in Bldg 253 – cored through concrete up to 30" thick (8/7)



Installing soil vapor monitoring point (9 total) in RU -C1 (SVE Area 3 on 8/14)



Parcel C Map



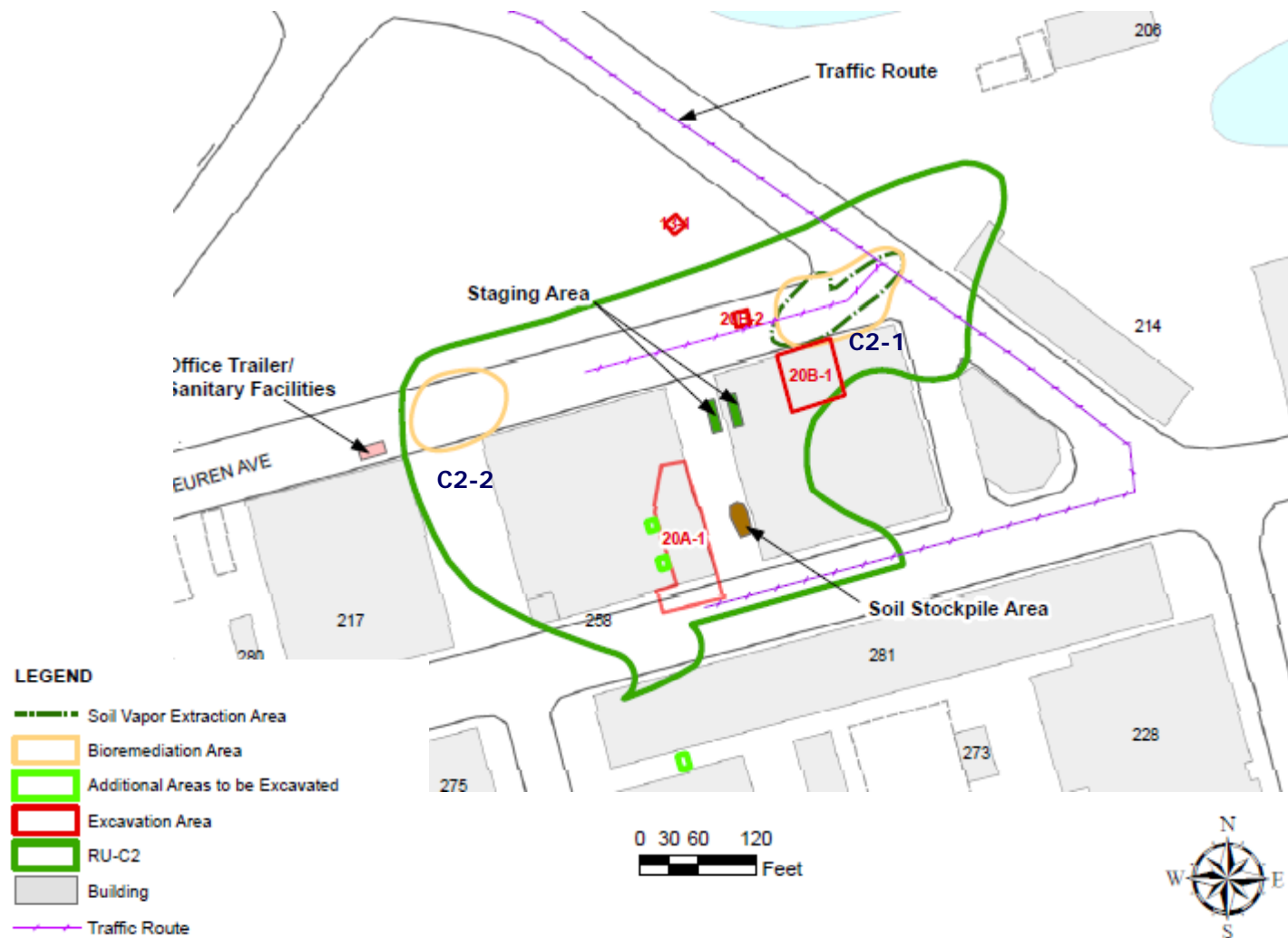
- Parcel C Boundary
- 231 Building Number



Approximate RU-C2 Boundary



RU-C2 Map





RU-C2 Update



- Injected Sirem KB-1 Plus (DHC and sodium lactate) at Building 251 and 258 - July 9th – July 16th.
- Began 1-month post injection sampling on August 12th 2013 and will be completing sampling this week.



RU-C2 Preliminary Groundwater Results – Building 258 (Con't)

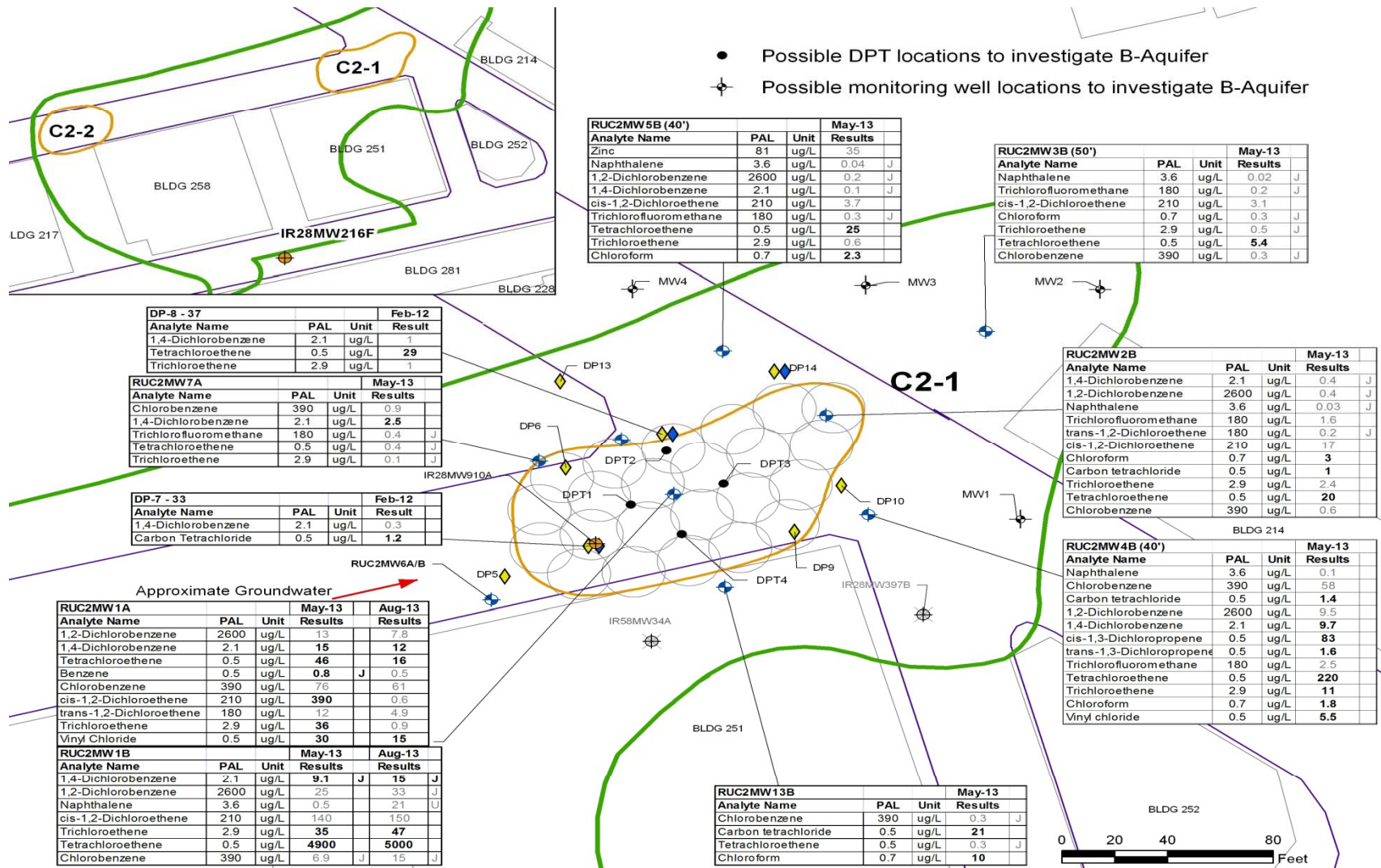


Additional Action in B-Aquifer

- Define area of contamination by installing additional DPT borings and monitoring wells
- Treat contamination in-situ (ZVI or bio)
- Continue monitoring concentrations at MW1B to track treatment effectiveness

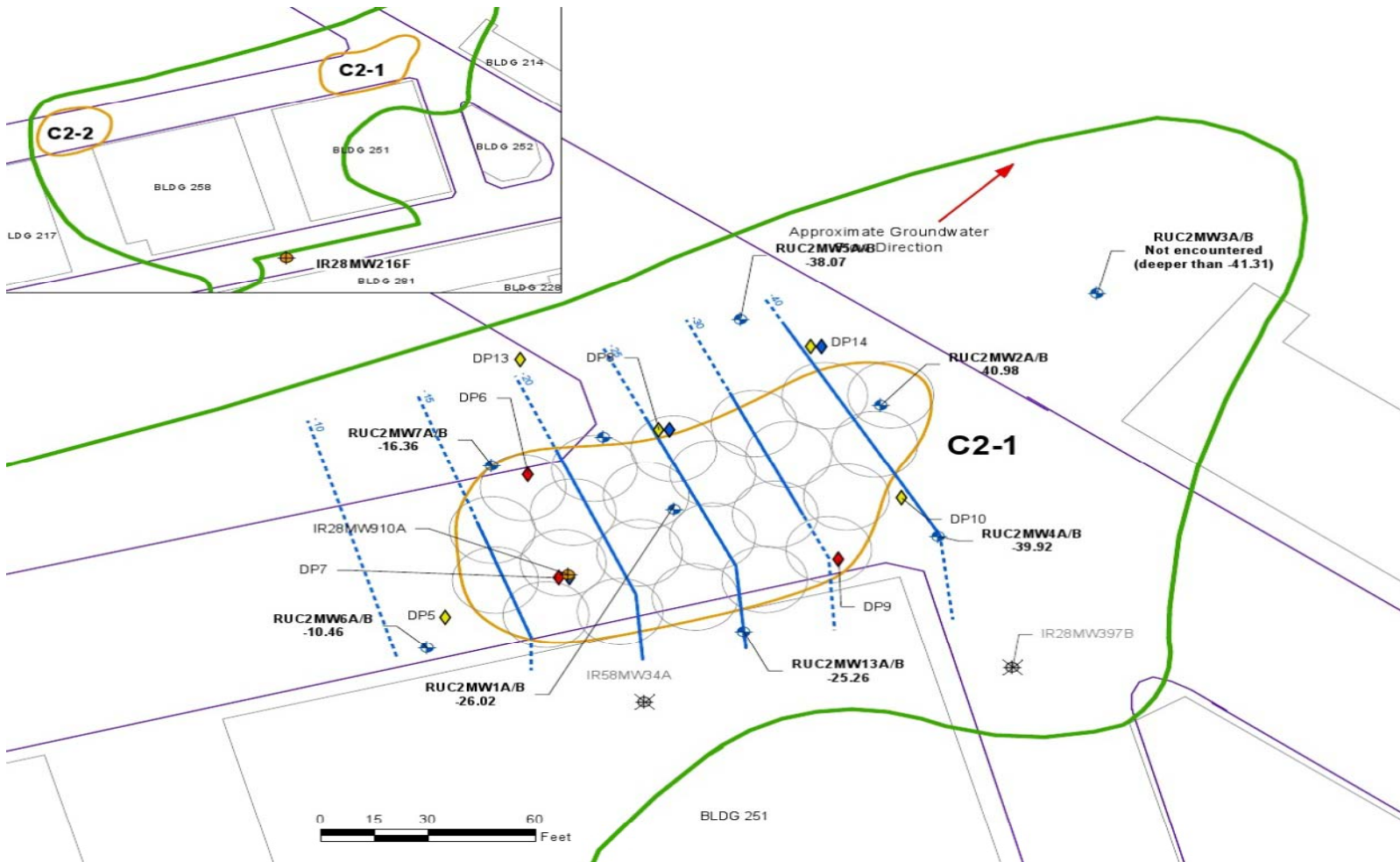


Building 251 Detections in the B-Aquifer



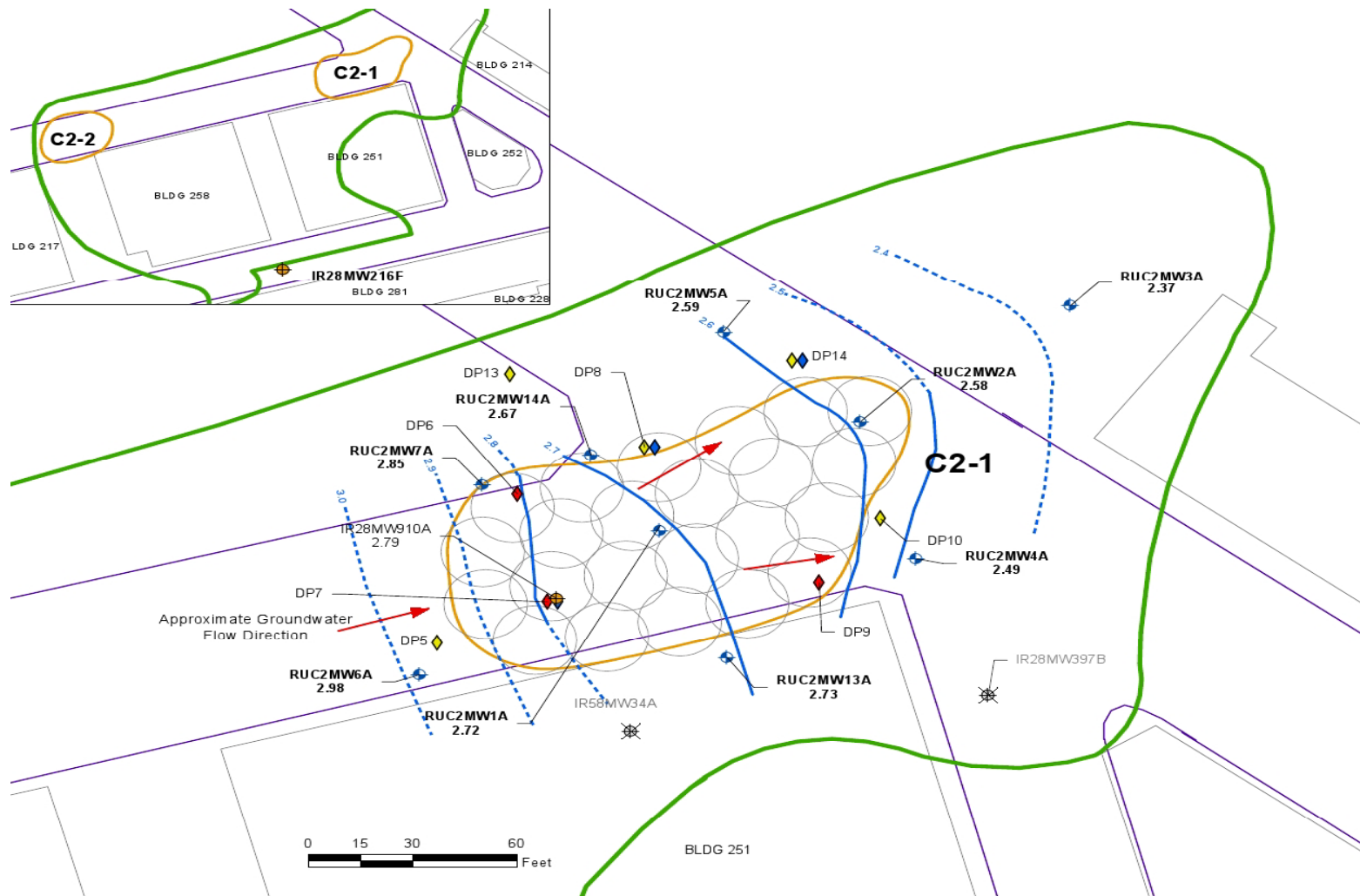


Bedrock Surface at Building 251



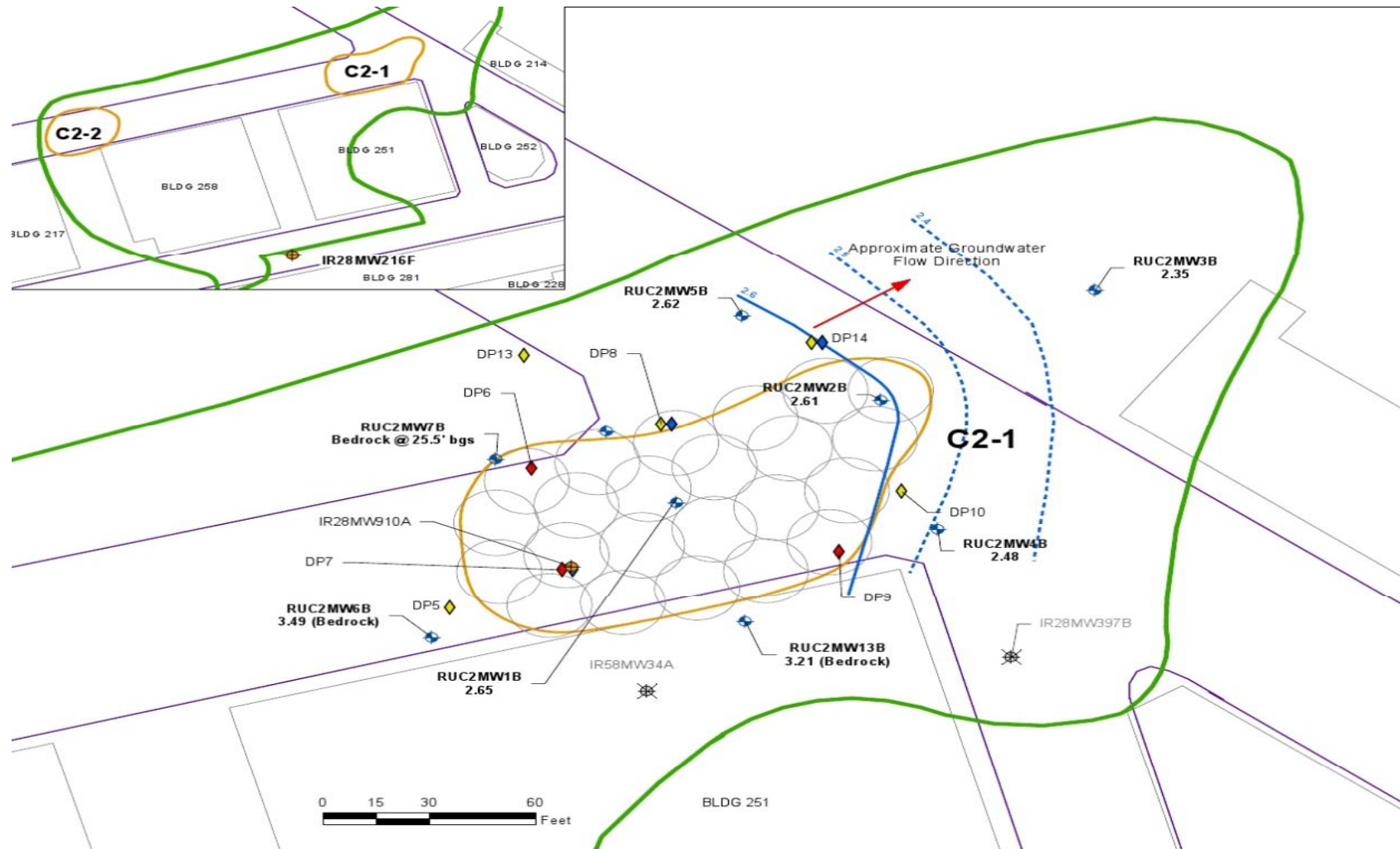


Groundwater Gradient in the A-Aquifer





Groundwater Gradient in the B-Aquifer





RU-C2 -Schedule



Schedule

- Monitoring well, SVE well, and soil vapor probe installation 3/18/1013 – 4/23/2013
- Baseline groundwater sampling – 4/23/2013 – 5/22/2013
- ISB injections 5/6/2013 – 6/7/2013
- Bio-augmentation injections – 7/09/2013-7/19/2013
- Excavations – 10/1/2013 - 11/9/2013
- Groundwater sampling (1 month post injection event) – 8/12/2013 - Present
(additional events 3, 6, 9, and 12 months after injections)
- Installation of SVE system – 11/15/2013
(following excavation 20B-1 which is adjacent to the SVE area)



Durable Covers



- Durable Covers
 - Contract postponed until FY 2014